

Claims

What is claimed is:

1. A method of identifying an object, comprising the steps of:

encoding an object by utilizing discernable physical attributes for encoding information regarding said object;
and

utilizing said encoded information as at least one element for composing a digital watermark for said object.

2. The method of claim 1, wherein said physical attributes further comprise a set of taggants in association with said object, wherein said set of taggants is comprised of members having discernable physical attributes predetermined for encoding information regarding said object.

3. The method of claim 1, wherein said physical attributes comprise at least one of size and shape.

4. The method of claim 1, wherein said physical attributes comprise at least one of color and emission wavelength.

5. The method of claim 1, wherein said physical attributes comprise loading factor.

6. The method of claim 1, wherein said physical attributes comprise at least one of a radio frequency and a response to a radio frequency.

7. The method of claim 1, wherein said physical attributes comprise at least one of a magnetic field and a response to a magnetic field.

8. The method of claim 1, wherein said physical attributes are related to one or more dimensions of said object.

9. The method of claim 1, further comprising the steps of:
detecting said encoded information in said digital watermark;
and
authenticating said object by comparing said encoded
information with said discernable physical attributes of said
object.
10. A method of identifying an object, comprising the steps
of:
digitally watermarking a barcode; and
associating said digitally watermarked barcode with said
object.
11. The method of claim 10, further comprising encoding
additional information into said digitally watermarked
barcode.
12. The method of claim 11, wherein said additional
information further comprises at least one of a date of
manufacture, a country of origin, and an authorized
distribution channel.
13. The method of claim 11, wherein said additional
information is retrieved from said digitally watermarked
barcode by use of a key.
14. The method of claim 10 further comprising encoding a key
in said digitally watermarked barcode such that failure to
read a digital watermark in said digitally watermarked
barcode results in an inability to read said barcode.
15. A method of identifying an object, comprising the steps
of:
encoding an object by utilizing discernable physical
attributes for encoding information regarding said object;

and

utilizing said encoded information as a key to retrieve data encoded in a digital watermark associated with said object.

16. The method of claim 15, further comprising the step of authenticating said object by utilizing said data encoded in said digital watermark.

17. The method of claim 15, wherein said physical attributes further comprise a set of taggants in association with said object, wherein said set of taggants is comprised of members having discernable physical attributes predetermined for encoding information regarding said object.

18. A method of identifying an object, comprising the steps of:

encoding an object by utilizing discernable physical attributes for encoding information regarding said object; and

utilizing said encoded information as at least one element for composing a digitally watermarked barcode for said object.

19. The method of claim 18 further comprising encoding a key in said digitally watermarked barcode such that failure to read a digital watermark in said digitally watermarked barcode results in an inability to read said barcode.

20. The method of claim 18, wherein said physical attributes further comprise a set of taggants in association with said object, wherein said set of taggants is comprised of members having discernable physical attributes predetermined for encoding information regarding said object.

21. The method of claim 20, further comprising the step of utilizing said encoded information as a key to read a digital

watermark in said digitally watermarked barcode.

22. The method of claim 18, wherein said physical attributes comprise at least one of size and shape.

23. The method of claim 18, wherein said physical attributes comprise at least one of color and emission wavelength.

24. The method of claim 18, wherein said physical attributes comprise loading factor.

25. The method of claim 18 wherein said physical attributes comprise at least one of a radio frequency and a response to a radio frequency.

26. The method of claim 18 wherein said physical attributes comprise at least one of a magnetic field and a response to a magnetic field.

27. The method of claim 18, wherein said physical attributes are related to one or more dimensions of said object.

28. An apparatus for identifying or authenticating an object, comprising:

a detector for detecting physical attributes and a watermark associated with said object; and

a decoder for decoding information encoded by said physical attributes and information included in said watermark for at least one of identifying or authenticating said object.

29. The apparatus of claim 28, wherein said physical attributes associated with said object further comprise a set of taggants in association with said object, wherein said set of taggants is comprised of members having discernable physical attributes predetermined for encoding information regarding said object.

30. The apparatus of claim 29, further comprising a source for illuminating said set of taggants, wherein said detector comprises means for detecting at least one emission wavelength in response to the illumination.